

**Notice of Allowability**

Application No.

10/809,550

Examiner

Helene Klemanski

Applicant(s)

TAGUCHI ET AL.

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the terminal disclaimers filed March 23, 2007.
2. ☒ The allowed claim(s) is/are 1,2 and 7.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

*Helene Klemanski*  
HELENE KLEMANSKI  
PRIMARY EXAMINER  
GROUP 1700

## DETAILED ACTION

### *Terminal Disclaimer*

1. The terminal disclaimers filed on March 23, 2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No's. 7,014,308, 7,083,668, 7,037,365, 7,077,894, 6,874,882 and any patent granted on Application No's. 10/508,792, 10/808,464, 11/360,611, 10/503,894 and 10/806,453 have been reviewed and are accepted. The terminal disclaimers have been recorded.

## REASONS FOR ALLOWANCE

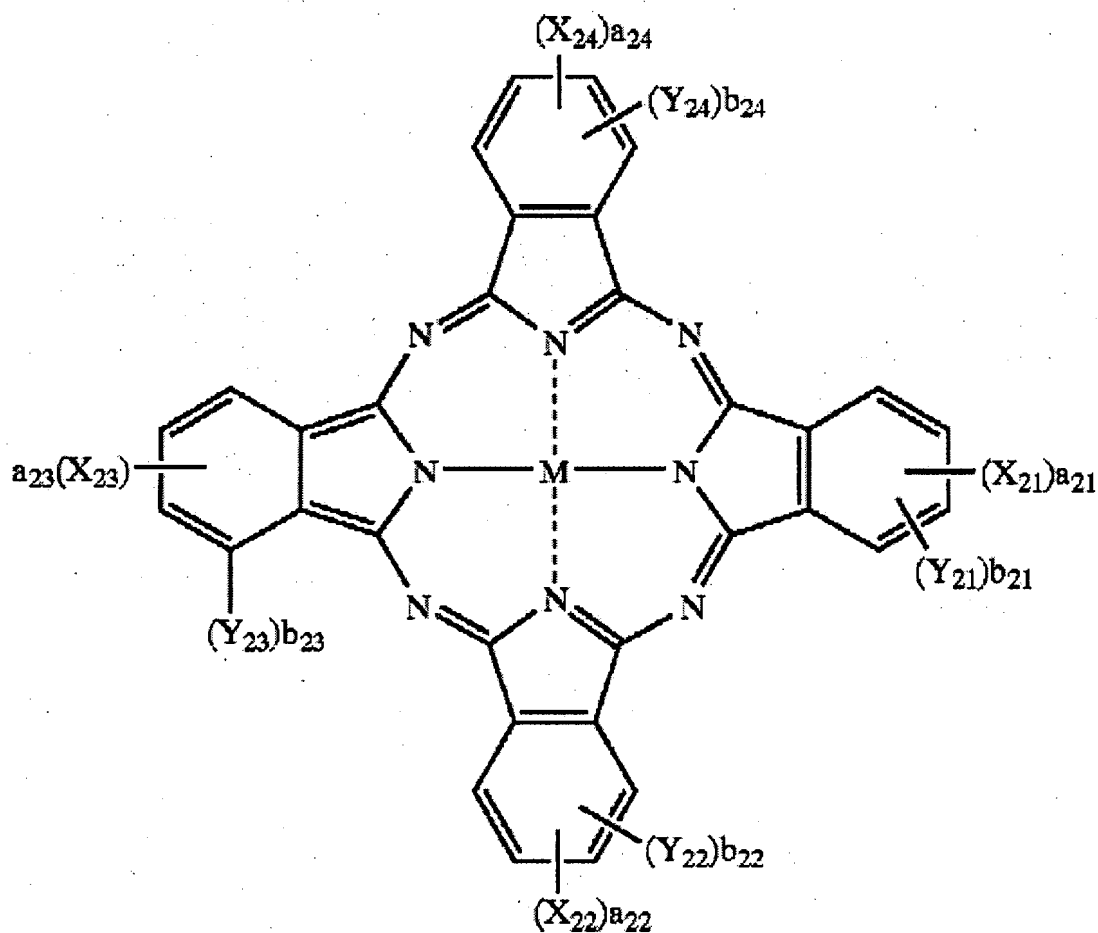
2. The following is an examiner's statement of reasons for allowance: This application teaches an ink set comprising inks, each of the inks being an ink obtained by dissolving at least one dye of an azo dye having a heterocyclic group or a phthalocyanine dye in an aqueous medium, wherein the dyes contained in the ink have a solubility of 15 g or more in 100 g of water at 25 °C under atmospheric pressure, and the azo dye or phthalocyanine dye is represented by the following formula (1), (2), (3) or (4);

Formula (1):



wherein A<sub>11</sub> and B<sub>11</sub> each independently represents a heterocyclic group which may be substituted;

Formula (2)

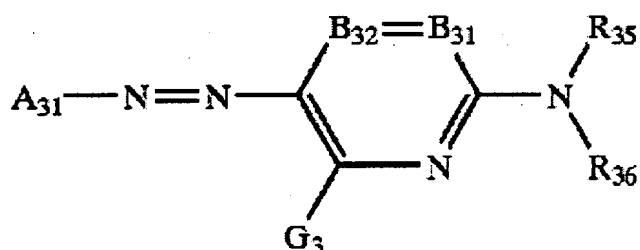


wherein  $X_{21}$ ,  $X_{22}$ ,  $X_{23}$ , and  $X_{24}$  each independently represents  $-\text{SO}-Z_2$ ,  $-\text{SO}_2-Z_2$ ,  $-\text{SO}_2\text{NR}_{21}\text{R}_{22}$ , a sulfo group,  $-\text{CONR}_{21}\text{R}_{22}$  or  $\text{COOR}_{21}$ ; each  $Z_2$  independently represents a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted alkenyl group, a substituted or unsubstituted aralkyl group, a substituted or unsubstituted aryl group or a substituted or unsubstituted heterocyclic group;  $\text{R}_{21}$  and  $\text{R}_{22}$  each independently represents H, a substituted or unsubstituted alkyl group, a substituted or unsubstituted cycloalkyl group, a substituted or unsubstituted alkenyl group, a substituted or unsubstituted aralkyl group, a

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substituted or unsubstituted aryl group or a substituted or unsubstituted heterocyclic group; wherein  $Y_{21}$ ,  $Y_{22}$ ,  $Y_{23}$ , and  $Y_{24}$  each independently represents a monovalent substituent;  $a_{21}$  to  $a_{24}$  each independently represents a number of 0 or an integer of 1 to 4 but all are not 0 at the same time;  $b_{21}$  to  $b_{24}$  each independently represents a number of 0 or an integer of 1 to 4, provided that when  $a_{21}$  to  $a_{24}$  and  $b_{21}$  to  $b_{24}$  each represents a number of 2 or more, the plurality of  $X_{21s}$ ,  $X_{22s}$ ,  $X_{23s}$ ,  $X_{24s}$ ,  $Y_{21s}$ ,  $Y_{22s}$ ,  $Y_{23s}$ , and  $Y_{24s}$  may be the same or different and M represents H, a metal atom or an oxide, hydroxide or halide thereof;

Formula (3):



wherein  $A_{31}$  represents a 5-membered heterocyclic group;  $B_{31}$  and  $B_{32}$  each represents  $=CR_{31}-$  or  $-CR_{32}=$  or either one of  $B_{31}$  and  $B_{32}$  represents a nitrogen atom and the other represents  $=CR_{31}-$  or  $-CR_{32}=$ ;  $R_{35}$  and  $R_{36}$  each independently represents H, an aliphatic group, an aromatic group, a heterocyclic group, an acyl group, an alkoxycarbonyl group, an aryloxy carbonyl group, a carbamoyl group, an alkylsulfonyl group, an arylsulfonyl group or a sulfamoyl group, and each group may further have a substituent;  $G$ ,  $R_{31}$  and  $R_{32}$  each independently represents H, a halogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, a carboxyl group, a carbamoyl group, an alkoxycarbonyl group, an aryloxy carbonyl group, a

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heterocyclic oxycarbonyl group, an acyl group, a hydroxy group, an alkoxy group, an aryloxy group, a heterocyclic oxy group, etc., and each group may further have a substituent, and  $R_{31}$  and  $R_{35}$  or  $R_{35}$  and  $R_{36}$  may combine to form a 5- or 6-membered ring;

Formula (4):



wherein  $A_{41}$ ,  $B_{41}$  and  $C_{41}$  each independently represents an aromatic group which may be substituted or a heterocyclic group which may be substituted. The closest prior art of record is EP 1384762 and U.S. Patent Application Publication No's. 2003/0210310, 2004/0187734, 2004/0050291 and 2004/0053988, issued to Wachi, Oazwa et al., Taguchi et al. and Taguchi et al. respectively, however, applicants have filed a certified English translation of their foreign priority which entitles them to a date of March 27, 2003 which is earlier than any of the effective filing dates of the above EP reference and the U.S. Patent Application Publication No's. Accordingly, the 102(a) rejection over the above EP reference and the 102(e) rejections over each of the above U.S. Patent Application Publication references have been overcome and the application is allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

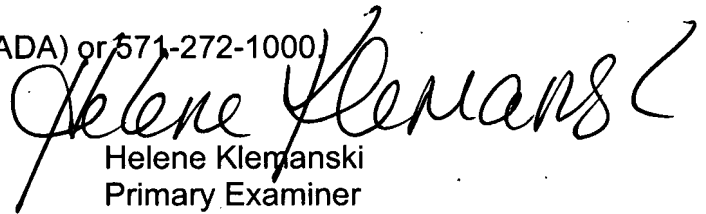
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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Klemanski whose telephone number is (571) 272-1370. The examiner can normally be reached on Monday-Friday 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Helene Klemanski  
Primary Examiner  
Art Unit 1755



HK  
April 13, 2007